Mid-Atlantic Tidal Wetland Rapid Assessment Method V4.1

Site # _____ Site Name _____ Date _____

Time of Start& Finish____:____ ____:____ Crew Initials_____

Watershed _____ Sub-Watershed_____

lat/long _____ AA shape: circle or rectangle or entire wetland polygon (circle)

AA moved from original location? Yes or No (circle one) If yes: distance, direction, reason _____

Classification: (circle one)

Marine Tidal
Fringing Estuarine Tidal
Expansive Estuarine Tidal
Back Barrier Estuarine Tidal
Fringing Palustrine Tidal
Expansive Palustrine Tidal

Reference or Assessment (circle one)

Natural, Re-establishment, establishment
Enhancement, Impoundment (circle one)

What best describes the tidal stage over the course of the time spent in the field? (circle one)

Note: It is recommended that the assessment be conducted at low tide.

Tide Stage

H <----------M----------> L

5 4 3 2 1

Range of Photo Identification Numbers:

Stressor Photo Description:

Assessment Area Sketch

low marsh or high marsh or fresh (circle one)
Distance to Upland _____meters
Distance to Open Water _____ meters

Stability of AA (check one)

____Healthy & Stable
____Beginning to deteriorate and/or some fragmentation
____Severe deterioration and/or substantial fragmentation

Soils

Depth of organic layer (cm):
Comments on soil sample:

Salinity _____ppt

Vegetation Communities and Features

Enter midpoint for each species/combination present using the cover class chart below

_____Spartina alterniflora	_____Phragmites australis	_____root mat
_____Spartina patens	_____pannes, pools, creeks	_____unvegetated, mud or sand
_____Spart. alterniflora/Spart. cynosuroides	_____open water	____unhealthy marsh-SWD, deterioration
_____Spartina patens-Distichlis spicata	_____ditches	_____other 1_____

Cover Classes	MidPt	Cover Classes	MidPt	Cover Classes	MidPt
0	0	6-25%	15.5	76-99%	88.5
<1%	0.5	26-50%	38	100%	100
1-5%	2.5	51-75%	63		

Comments:

Qualitative Disturbance Rating

1	2	3	4	5	6

Low <----------Disturbace----------> High

(circle one)

Assessment Complete: Yes No (circle one)

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Site # _____ Date ____/_____/_____

Attribute 1: Buffer/Landscape (All W/in 250m)

B1. Percent of Assessment Area Perimeter with 10m-Buffer

Percent _____%	Max: 19,164m²
Alternative States(not including open-water areas)	**Rating**
Buffer is 100% of AA perimeter.	**12**
Buffer is 94-99.9% of AA perimeter.	**9**
Buffer is 80-93.9% of AA perimeter.	**6**
Buffer is <79.9% of AA perimeter.	**3**

B2. Natural Land Use in Buffer (excluding AA)

% Natural Land Use _____	Max: 274,890m²
Alternative States	**Rating**
100% natural land use buffer	**12**
75-99.9% natural land use buffer	**9**
55-74.9% natural land use buffer	**6**
<54.9% natural land use buffer	**3**

B3. Altered and High Impact Land Use in Buffer (excluding AA)

Un-Natural Land Use _____% High Impact Land Use _____% (250m buffer = 274,890m²)

Alternative States	Rating
No Un-Natural Landuses	**12**
0-20% Un-Natural Land Use and <5% High Impact Land Use	**9**
20-50% Un-Natural Land Use and/or 5-20% High Impact Land Use	**6**
>50% Un-Natural Land Use or >20% High Impact Land Use	**3**

B4. Buffer Landscape Condition

Alternative States	Rating
AA's surrounding landscape is comprised of only native vegetation, has undisturbed soils, no point source discharges, and there is no evidence of human disturbance.	**12**
AA's surrounding landscape is dominated by native vegetation, has undisturbed soils, receives water from a stormwater pond drain, and there is to little or no evidence of human visitation.	**9**
AA's surrounding landscape is characterized by an intermediate mix of native and non-native vegetation, and/or a moderate degree of soil disturbance/compaction, and/or receives water from one or more agricultural field ditch(es), and/or there is evidence of moderate human visitation.	**6**
AA's surrounding landscape is characterized by barren ground and/or dominated by invasive species and/or highly compacted or otherwise disturbed soils, and/or receives discharge directly from a polluted source, and/or there is evidence of very intensive human visitation.	**3**

B5. Barriers to Landward Migration

% Perimeter Obstructed _____%

Dist. From Center of AA _____m

Alternative States	Rating
Absent: no barriers	**12**
Low: <10% of perimeter obstructed	**9**
Moderate: 10-25% of perimeter obstructed	**6**
High: 26-100% of perimeter obstructed	**3**

Attribute 3: Habitat (All W/in AA)

HAB1a. Bearing Capacity (Hummocks) *

% Hummocks _____%	Mark Depth (cm)							
	Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8
Water Depth (cm)								
Initial depth								
Blow 1								
Blow 2								
Blow 3								
Blow 4								
Blow 5 (Final)								
Blow 5 - Initial								

Hummocks average = _____

*** if hummocks are present >10% use this workspace**

____ % of AA in hummocks x ____ hummocks avg (HAB1a)= _____

_____ % of AA in hollows x ____ hollows average (HAB1b) = _____

Sum of two weighted averages = _____

Tidal Salt **Tidal Fresh**

Av. of Final - Initial for the 8 Sub-plots	Rating (circle one)	Av. of Final - Initial for the 8 Sub-plots	Rating (circle one)
≤ 1.8	**12**	≤ 4.4	**12**
1.9-4.0	**9**	4.4-6.7	**9**
4.1-6.2	**6**	6.8-11.4	**6**
> 6.2	**3**	> 11.4	**3**

Average Final-Initial =_____cm

HAB1b. Bearing Capacity (Unvegetated Hollows) if applicable*

% Hollows _____%	Mark Depth (cm)							
	Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8
Water depth (cm)								
Initial depth								
Blow 1								
Blow 2								
Blow 3								
Blow 4								
Blow 5								
Blow 5 - Initial								

Hollows average = _____

HAB2. Horizontal Vegetative Obstruction

Sub-plot	1	3	5	7
0.25m				
0.50m				
0.75m				
1.00m				
1.25m				
Sum				
Dominant Veg. Type				

Out of:_____

% unobstructed:_____

100-% unobstructed= % obstructed:_____

Tidal Salt	Tidal Fresh	Rating
≥60%		**12**
45%-59.9		**9**
30%-44.9%		**6**
≤29.9%		**3**

HAB3. # of Plant Layers (covers ≥ 10% of AA)

Floating/ Aquatic Species	____
Short <0.3m	____
Medium 0.3m- 0.75m	____
Tall 0.75m- 1.5m	____
Very Tall > 1.5m	____

Number of Plant Layers: _____

Scoring Plant Layers		Rating
4-5 layers		**12**
2-3 layers		**9**
1 layer		**6**
0 layer		**3**

HAB4. Species Richness (covers > 10% of AA)

Amaranthus cannabinus	____	*Polygonum arifolium*	____
Asclepias incarnata	____	*Polygonum punctatum*	____
Atriplex prostrata	____	*Polygonum ramosissimum*	____
Baccharis halimifolia	____	*Pontederia cordata*	____
Boehmeria cylindrica	____	*Sagittaria latifolia*	____
Bolboschoenus robustus	____	*Salicornia virginica*	____
Clethra alnifolia	____	*Saururus cernuus*	____
Distichlis spicata	____	*Schoenoplectus americanus*	____
Echinochloa walteri	____	*Scirpus taberaemontani*	____
Hibiscus moscheutos	____	*Solidago sempervirens*	____
Impatiens capensis	____	*Spartina alterniflora*	____
Iva frutescens	____	*Spartina cynosuroides*	____
Juncus effusus	____	*Spartina patens*	____
Juncus gerardii	____	*Symplocarpus foetidus*	____
Kosteletzkya virginica (pentacarpos)	____	*Typha angustifolia*	____
Leersia oryzoides	____	*Typha latifolia*	____
Limonium carolinianum	____	*Zizania aquatica*	____
Nuphar luteum	____		____
Panicum virgatum	____		____
Peltandra virginica	____		____
Phragmites australis	____		____
Pluchea odorata	____		____

HAB4. Species Richness

Alternative States	Rating
≥ 6 species	**12**
4 or 5 species	**9**
2 or 3 species	**6**
1 species	**3**

HAB5. % Invasive Cover in AA

Alternative States	Rating
0%	**12**
>0-25%	**9**
26-50%	**6**
>50%	**3**

Invasive Species Present:_____
_____
_____

Attribute 2: Hydrology

H1a. Ditching/Excavation (OMWM) (AA only) (Salt)

% of AA Ditched or Excavated	Rating
No Ditching	**12**
0-2.5%	**9**
2.6-5%	**6**
>5%	**3**

	Ditch 1	Ditch 2	Ditch 3
Width 1			
Width 2			
Width 3			
Length			
Total			

OR

H1b. Point Source (250m) (Fresh)

Alternative States	Rating
Absent, No Discharge	**12**
Low: 1 small discharge from a natural area	**9**
Moderate: 1 discharge from a developed area or 2 discharges from a natural area	**6**
High: ≥ 2 discharges from a developed area or ≥ 3 from a natural area	**3**

H2. Fill (AA only)

% of AA Filled	Rating
No Fill	**12**
0.1-5%	**9**
5.1 - 10%	**6**
≥10.1%	**3**

Estimate Amount of Fill: _____**% of AA**

Dimensions of Fill Pile: _____ _____ _____ _____

H3. Diking & Tidal Restriction (250m)

Alternative States	Rating
Absent: no restriction, free flow	**12**
Elevated Path	**9**
Dike, Levee Bridge, Berm	**6**
Undersized Culvert or Bridge	**3**

Description of Restriction: _____

	AA=7,854m²	
1%	78m²	9m x 9m
5%	393m²	20m x 20m
10%	785m²	28m x 28m

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Site Number:	Site Name:		Date:_____/____/____
Attributes and Metrics	**Raw Value**	**Scores**	**Comments**
Buffer/Landscape			
B1. % of AA Perimeter with 10m Buffer			
B2. Natural Land Use			
B3. Surrounding Land Use			
B4. 250 Landscape Condition			
B5. Barriers to Landward Migration			
((((∑(B1,B2,B3,B4,B5))/60)*100)-25)/75)*100 = **Buffer Attribute Score**			
Hydrology			
H1 Ditching & Excavating (OMWM) or Point Sources			
H2. Fill			
H3. Diking/Restriction			
((((∑(H1,H2,H3))/36)*100)-25)/75)*100 = **Hydrology Attribute Score**			
Habitat			
HAB1. Bearing Capacity			
HAB2. Horizontal Vegetative Obstruction			
HAB3. Number of Plant Layers			
HAB4. Species Richness			
HAB5. Percent Invasives			
((((∑(HAB1,HAB2,HAB3,HAB4,HAB5))/60)*100)-25)/75)*100 = **Habitat Attribute Score**			
((Buf/Land + Hydrology + Habitat Attribute Scores)/3)= Final Score		**Final Score =_____**	